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PRE-APPEAL BRIEF REQUEST FOR REVIEW	Docket Number (Optional) MAT-8716US	
	Application Number 10/540,606	Filed June 27, 2005
	First Named Inventor Toshiaki TAKENAKA et al.	
	Art Unit 1792	Examiner Brian K. Talbot

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

- ☐ applicant/inventor.
- ☐ assignee of record of the entire interest.
See 37 CFR 3.7.1 Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)
- ☒ attorney or agent of record.
Registration number **34,515**
- ☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____

Signature

Lawrence E. Ashery

Typed or printed name

610-407-0700

Telephone number

September 15, 2009

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Claims 1-5, 7-16, 23, 24 and 26-35 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Takenaka (JP 2001-213,064) in combination with Kuroki (JP 57-103862). It is respectfully submitted, however, that Applicants' claims are patentable over the art of record for the reasons set forth below.

As discussed during the telephone interview of May 11, 2009, Kuroki discloses depressions and elevated portions. Kuroki, however, lacks Applicants' claimed feature of:

... forming a plurality of depressions in the first surface in the at least one squeegee area, each depression surrounded by a respective periphery having an elevation higher than an elevation of the first surface ...

This is illustrated by Applicants' Fig. 3 in which cleaning part 6 is surrounded, for example, by swollen portion 7.

The prior art of record lacks Applicants' claimed "depression surrounded by a respective periphery having an elevation higher than an elevation of the first surface." During the telephone interview, the Examiner and Applicants' representative discussed Fig. 4 of the Kuroki patent. Fig. 4 of Kuroki illustrated elevated portions 8' and the depressed regions 5. This is different than Applicants' claimed invention in which each depression is surrounded by a periphery with higher elevation.

The advantage of Applicants' claimed feature is described in the originally filed application at page 10, line 16 et seq. where it is stated:

Using the method discussed above, high viscous paste of a squeegee edge part is removed at the cleaning part before past is filled in through-holes in a product. Therefore, solid past is not remained at the through-holes in the product. Thus, when the mask films are peeled, possibility that a part of the past is removed to a side of the mask films and quality of connection is adversely affected can be reduced.

Accordingly, claim 1 is patentable over the art of record.

In the outstanding Official Action, the Examiner has maintained his previous rejection. The Examiner still combines Takenaka (JP 2001-213,064) with Kuroki (JP 57-103862). The Examiner's argument is as follows:

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified Takenaka et al. (JP2001-213,064) process by including "elevations" along with the depressions as evidenced by Kuroki et al. (JP 57-103862) with the expectation of achieving a more complete removal of the excess paste from the squeegee. (Official Action, page 3, bottom, through page 4, line 2).

The Examiner has ignored important limitations that appear in claim 1, lines 6 and 7. Those limitations are:

- 1) "each"
- 2) "surrounded"
- 3) "respective"

The above three limitations are completely missing from the Examiner's arguments. Furthermore, Appellants note the following language which appears in their application at page 11, line 23 through line 26.

It is acceptable that surroundings of processed part at mask film 2a have swollen portions 7. A height of swollen portion 7 is preferably set not lower than $3\mu\text{m}$. If it lower than $3\mu\text{m}$, an effect of removing paste bonded to an edge of a squeegee deteriorates.

Kuroki does not have elevated portions around each depression. According to Appellants' application, elevations "lower than $3\mu\text{m}$ " (i.e. no elevations) will not be effective in removing paste.

Appellants are attaching to this Pre-Appeal Brief Conference Request, a reproduction of Appellants' claim 1. In this reproduction, spaces have been provided for the Examiner to indicate where, in the prior art references of record, Appellants' claimed features are believed to appear. If the Examiner maintains this appeal, the Examiner is respectfully requested to indicate on the attached sheet where the claimed

features are found in the art of record and to return that sheet to the Appellants. By having the Examiner complete and return the attached sheet to the Appellants, this will significantly expedite prosecution.

Claims 2, while not identical to claim 1, is also patentable over the art of record for reasons similar to those set forth above with regard to claim 1.

The remaining claims are patentable by virtue of their dependency on allowable independent claims.

Claim 6 and 25 have been rejected as being unpatentable over Takenaka and Kuroki in further combination Kozo (JP 2001-7514). These claims are also patentable by virtue of their dependency on allowable independent claims.

Attachment: Appellants' Claim 1

FP_554485

CLAIM 1

PLEASE FILL IN AND RETURN TO APPELLANTS

1. A method for manufacturing a circuit board comprising:

attaching a mask film to a substrate in at least one squeegee area, the mask film including a first surface opposite a surface attached to the substrate;

forming a plurality of depressions in the first surface in the at least one squeegee area, each [where in prior art:_____]
depression surrounded [where in prior art:_____]
by a respective periphery having an elevation higher than an elevation of the first surface;

forming a through-hole through the mask film and the substrate in the at least one squeegee area; filling conductive paste into the through-hole by using a squeezing operation in the at least one squeegee area; and

cleaning a squeegee using the formed plurality of depressions during the squeezing operation.